II. Please amend the claims as follows:

1. *[canceled]*

2. *[currently amended]* The catalytic surface of claim 24 wherein [~~in which~~] the coating particles are in the nominal diameter size distribution range of <1 micron.

3. *[currently amended]* A method for depositing a catalyst coating of small size metal oxide and noble metal particles onto the surface of a substrate comprising directing a thermal spray of a powder [~~principally comprising a mixture~~] of large size particles ~~selected from the groups of 1) metal hydroxide, metal carbonate, and metal nitrate particles and 2) a noble metal, noble metal hydroxide, noble metal carbonate, and noble metal nitrate~~] principally comprising 1) one or more than one powder composition selected from the group consisting of metal hydroxides, metal carbonates, and metal nitrates capable of decomposing to a metal oxide and 2) one or more than one powder composition selected from the group consisting of noble metals, noble metal hydroxides, noble metal carbonates, and noble metal nitrates capable of decomposing to a metal onto the surface of the substrate such that the powder decomposes by [~~pyrolosis~~] pyrolysis to small size metal oxide and noble metal particles that bond to the substrate surface.

4. *[currently amended]* A method for depositing a catalyst coating of metal oxide/noble metal particles in the nominal diameter size distribution range of <3 microns onto the surface of a substrate comprising directing a thermal spray of a powder [~~principally comprising a mixture~~] of large size particles [~~selected from the groups of 1) metal~~

~~hydroxide, metal carbonate, and metal nitrate particles capable of decomposing to a metal oxide and 2) a noble metal, noble metal hydroxide, noble metal carbonate, and noble metal nitrate capable of decomposing to a metal or metal oxide directly~~] principally comprising 1) one or more than one powder composition selected from the group consisting of metal hydroxides, metal carbonates, and metal nitrates capable of decomposing to a metal oxide and 2) one or more than one powder composition selected from the group consisting of noble metals, noble metal hydroxides, noble metal carbonates, and noble metal nitrates capable of decomposing to a metal onto the surface of the substrate such that the powder decomposes by [~~pyrolosis~~] pyrolysis to produce metal oxide and noble metal particles in the nominal diameter size distribution range of <3 microns that bond to the substrate surface.

5. *[currently amended]* A method for depositing a metal oxide/noble metal catalyst onto the surface of a substrate comprising directing a thermal spray of a powder of large size particles in a nominal diameter size distribution range of >10 micrometers and principally comprising 1) one or more than one powder composition selected from the group consisting of metal hydroxides, metal carbonates, and metal nitrates capable of decomposing to a metal oxide and 2) one or more than one powder composition selected from the group consisting of noble metals, noble metal hydroxides, noble metal carbonates, and noble metal nitrates capable of decomposing to a metal directly onto the surface of the substrate such that the thermally sprayed powders respectively decompose by [~~pyrolosis~~] pyrolysis to produce metal oxide and noble metal particles in the nominal diameter size distribution range of <3 microns that bond to the substrate surface.

6. *[previously presented]* The method of claim 4 or claim 5 wherein the metal hydroxide, metal carbonate, or metal nitrate particle capable of decomposing to a metal oxide is a cerium composition.

7. *[previously presented]* The method of claim 4 or claim 5 wherein the metal hydroxide, metal carbonate, or metal nitrate particle capable of decomposing to a metal oxide is an aluminum composition.

8. *[previously presented]* The method of claim 4 or claim 5 wherein the metal hydroxide, metal carbonate, or metal nitrate particle capable of decomposing to a metal oxide is a tin composition.

9. *[previously presented]* The method of claim 4 or claim 5 wherein the metal hydroxide, metal carbonate, or metal nitrate particle capable of decomposing to a metal oxide is a manganese powder composition.

10. *[currently amended]* The method of claim 4 or claim 5 wherein the metal hydroxide, metal carbonate, or metal nitrate particle capable of decomposing to a metal oxide is a copper powder composition.

11. *[cur previously presented]* The method of claim 4 or claim 5 wherein the metal hydroxide, metal carbonate, or metal nitrate particle capable of decomposing to a metal oxide is a cobalt powder composition.

12. *[previously presented]* The method of claim 4 or claim 5 wherein the metal hydroxide, metal carbonate, or metal nitrate particle capable of decomposing to a metal oxide is a nickel powder composition.

13. *[previously presented]* The method of claim 4 or claim 5 wherein the metal hydroxide, metal carbonate, or metal nitrate particle capable of decomposing to a metal oxide is a praseodymium powder composition.

14. *[previously presented]* The method of claim 4 or claim 5 wherein the metal hydroxide, metal carbonate, or metal nitrate particle capable of decomposing to a metal oxide is a terbium powder composition.

15. *[previously presented]* The method of claim 4 or claim 5 wherein the noble metal hydroxide, carbonate, or nitrate particle capable of decomposing to a metal is a palladium powder composition.

16. *[previously presented]* The method of claim 4 or claim 5 wherein the noble metal hydroxide, carbonate, or nitrate particle capable of decomposing to a metal is a platinum powder composition.

17. *[previously presented]* The method of claim 4 or claim 5 wherein the noble metal hydroxide, carbonate, or nitrate particle capable of decomposing to a metal is a ruthenium powder composition.

18. *[previously presented]* The method of claim 4 or claim 5 wherein the noble metal hydroxide, carbonate, or nitrate particle capable of decomposing to a metal is a rhodium powder composition.

19. *[previously presented]* The method of claim 4 or claim 5 wherein the noble metal hydroxide, carbonate, or nitrate particle capable of decomposing to a metal is a silver powder composition.

20. *[previously presented]* The method of claim 4 or claim 5 wherein the noble metal hydroxide, carbonate, or nitrate particle capable of decomposing to a metal is a iridium powder composition.

21. *[previously presented]* The method of claim 4 or claim 5 wherein the noble metal hydroxide, carbonate, or nitrate particle capable of decomposing to a metal is a gold powder composition.

22. *[currently amended]* The method of claim 3, [or] claim 4, or claim 5 wherein the powder is flame sprayed onto the surface of the substrate.

23. *[currently amended]* The method of claim 3, [or] claim 4, or claim 5 wherein the powder is plasma sprayed onto the surface of the substrate.

24. *[currently amended]* A catalytic surface produced in accordance with claim 3, [or] claim 4, or claim 5 comprising a coating of substantially uniform size particles of the groups of: a) one or more than one of cerium oxide, aluminum oxide, tin oxide, manganese oxide, copper oxide, cobalt oxide, nickel oxide, praseodymium oxide and terbium oxide particles; and b) one or more than one of ruthenium, rhodium, palladium, silver, iridium, platinum and gold particles, bonded to a substrate wherein the size distribution of the nominal diameters of the particles is in the range of <3 microns.

25. *[previously presented]* The method of claim 6 wherein a cerium powder is introduced into a thermal spray and undergoes a phase transition whereby the surface coating includes a porous CeO_2 coating.

26. *[currently amended]* The method of claim 3, [or] claim 4, or claim 5 wherein the large size particles selected from the group of a metal hydroxide, metal carbonate, and metal nitrate particles and the large size particles selected from the group of a noble metal, noble metal hydroxide, noble metal carbonate, and noble metal nitrate are separately introduced into the thermal spray directed onto the surface.

27. *[currently amended]* The method of claim 3, [or] claim 4, or claim 5 wherein large size particles selected from the group of a metal hydroxide, metal carbonate, and metal nitrate particles and large size particles selected from the group of a noble metal, noble metal hydroxide, noble metal carbonate, and noble metal nitrate are commingled and introduced as a powder mixture into the thermal spray directed onto the surface.